

# Winter Workshop Series 2021

# SIBC Finance

## Workshop 1:

General Finance & Investing | How does Valuation Work? | Determining the *Best* Investment | Resources for Success



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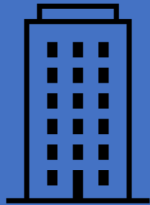
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# What Does “Finance” Really Mean?

## Buy Side



### Roles

Institutional & Retail | Mutual Fund | Hedge Fund |  
Asset Management | Wealth Management | Private Equity  
Real Estate Investing | Venture Capital



### Projects

Ares | Fidelity | GCM Grosvenor | GTCR |  
LaSalle | Maranon



### Characteristics

- Work for firms that **purchase** securities and other assets for the purposes of managing money
- Analysts determine how favorable an investment seems and how well it fits with the fund’s investment strategy
- Engaged in reading current news and trends, tracking down valuable information, and building financial models

## Sell Side



### Roles

Investment Banking (M&A, RX) | Equity Research |  
Commercial Banking | Sales and Trading | Advisory |  
ECM | DCM



### Projects

Baird | BAML | Evercore | Goldman Sachs | JP Morgan |  
Credit Suisse | Deutsche Bank | Houlihan Lokey | PJT |  
Morningstar | PWP | William Blair



### Characteristics

- Sell stocks, bonds, foreign exchange, and other products
- Analysts work for a brokerage firm and evaluates companies for future earnings growth and other investment criteria
- They sometimes place recommendations on stocks or other securities, typically phrased as "buy", "sell", or "hold"
- They offer their recommendations to clients



# So....what's the point of doing this?

TODAY



>

TOMORROW



**\$1 TODAY IS WORTH MORE THAN A DOLLAR TOMORROW BECAUSE OF THE TIME VALUE OF MONEY.  
YOU CAN INVEST THAT MONEY TODAY TO EARN A RETURN.**



# Where Do I Put My Money? What's A Good Investment?

You want to earn the highest possible return with the lowest possible risk, and this is a trade-off.



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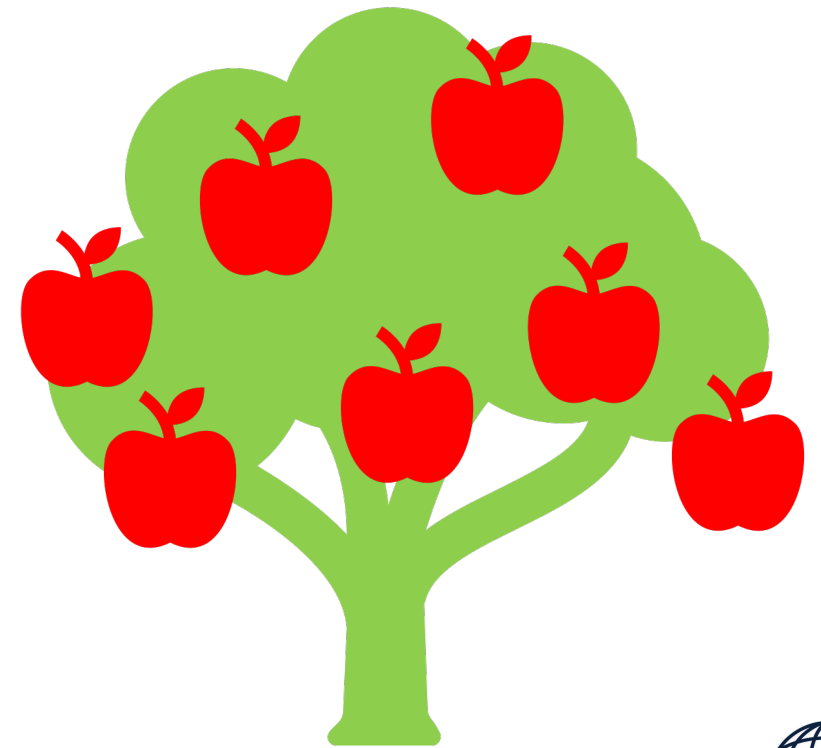
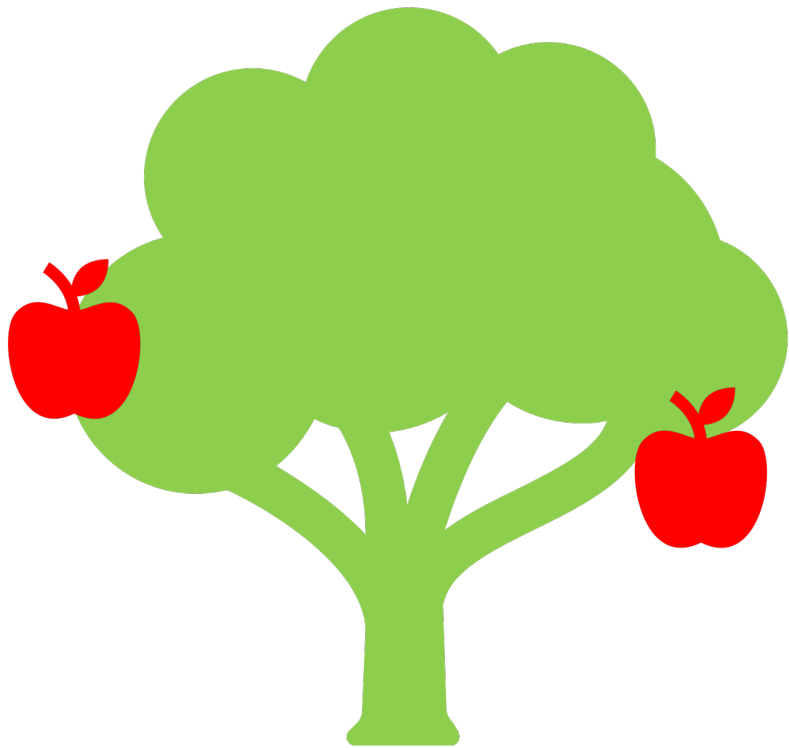
Resources for Success



# Where Do I Put My Money? What's A Good Investment?

I get that risk and return are correlated, but how do I find a good investment in the first place?

It all starts with value. Take these apple trees for instance. Which one would you pay more for, and how much would you pay?



# What is Value?

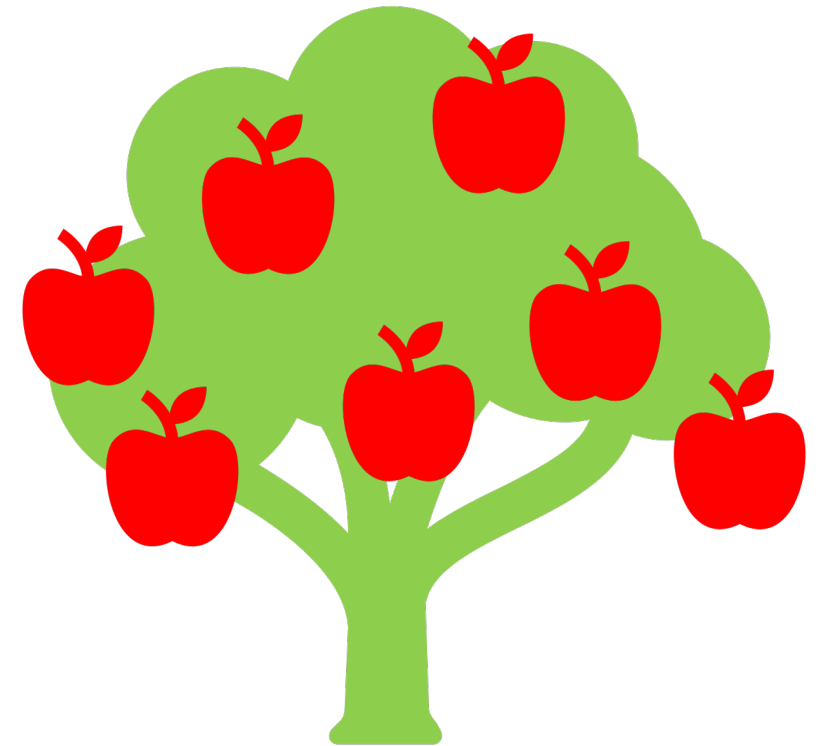
**Value is what an asset is worth to someone. For what price is someone (or some company) willing to buy or sell something?**

When you think about buying this apple tree, you might ask yourself these questions to help determine its value:

- 1. What is an apple worth?*
- 2. How many apples can this tree produce?*
- 3. How many apples can I sell to the market? How big is the apple market?*
- 4. How much money does it take to produce an apple (how much will I pay for water, fertilizer, etc)?*
- 5. What is the life of this tree? How long can it produce apples?*
- 6. Will this tree give me seeds I can use to grow another apple tree?*

**What does all this tell you? How much money you expect to earn from (and, in some cases, invest in) the apple tree.**

**Therefore, value is the present sum of the future cash flows.**

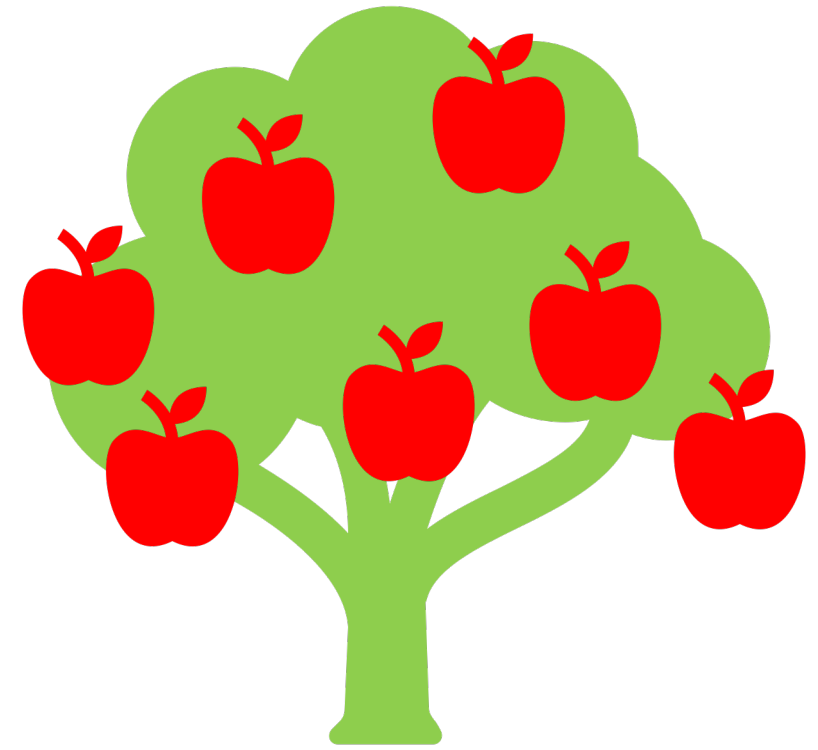




# What is Value?

Let's say we think this tree can produce \$1,000 worth of apples in its lifetime.

Would you buy the tree for \$1,000?



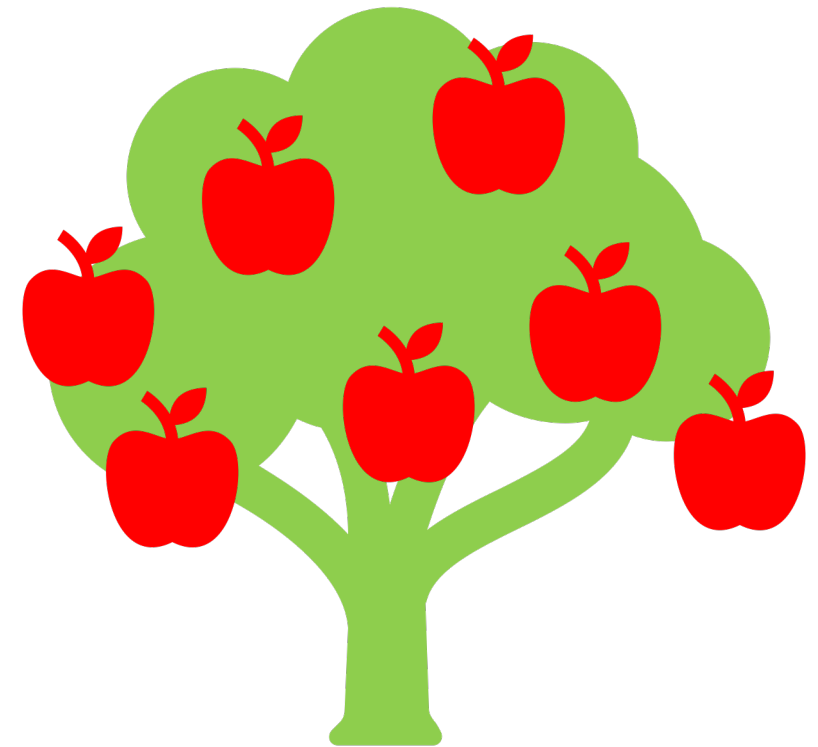
# What is Value?

Why wouldn't we buy the tree for \$1,000? Isn't that what we said its value was?!



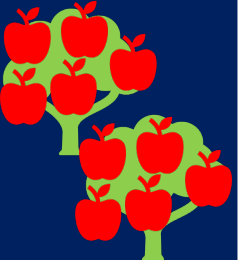
We forgot about the time value of money!

So, we must **discount the cash flows** to account for the opportunity cost we incur because we aren't investing our money elsewhere. **Value is the sum of discounted cash flows.**

That idea sounds and looks really complicated but basically boils down to this...



# What is Value?

Year	Apple Tree Business	Projected Cash Flow
1		\$200
2		\$300
3		\$500

Now we **discount** these values to get the **present value** of the business!

$$\text{Value of the firm} = \frac{CF_1}{(1+r)^1} + \frac{CF_2}{(1+r)^2} + \dots + \frac{CF_n}{(1+r)^n}$$

CF=cash flow

r=discount rate

The **discount rate (r)** is the **cost of capital**.

It's, what will be people charge you for using their money, or the return they expect from their money.

What drives this?

Risk, opportunity cost, forgoing chance to buy something

\$1000

$$\text{Value of the firm} = \frac{200}{(1+.05)^1} + \frac{300}{(1+.05)^2} + \frac{500}{(1+.05)^3}$$

CF=cash flow

r=discount rate

$$\text{Value of the firm} = 190.48 + 272.11 + 431.92$$

$$\text{Value of the firm} = \mathbf{\$894.51}$$



# What is Value?

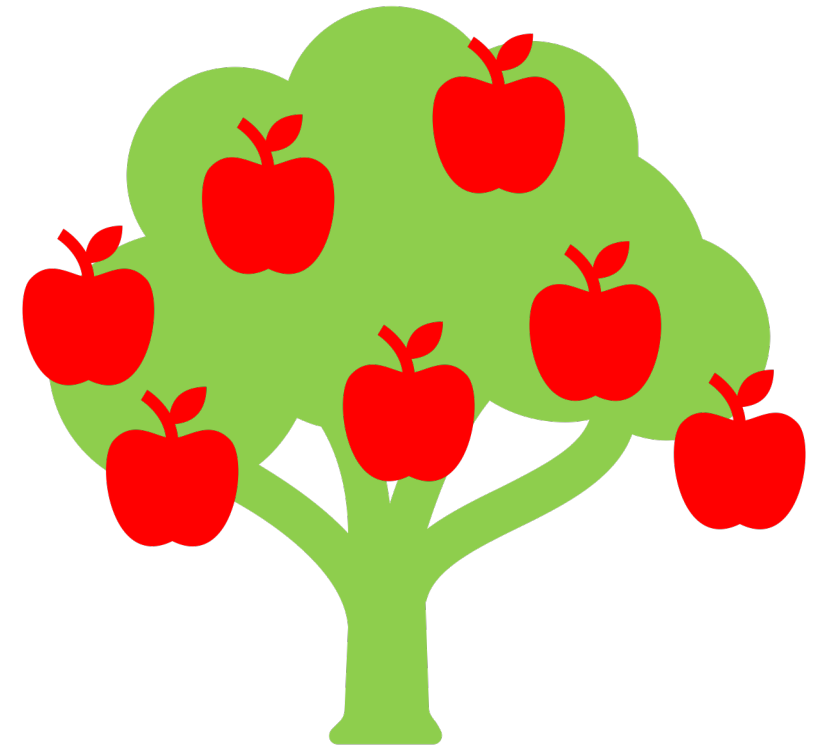
Knowing that the present value of the discounted future cash flows is \$894, what would you be willing to pay for the apple tree?

\$894?

\$850?

\$1000?

It all depends on your risk profile, goals and outlook!



# I Know The Tree's Value. How Much Am I Entitled To?

## Enterprise Value

Value of the whole firm

This is what we have been talking about. It is the value that all stakeholders are entitled to.

=

## Equity Value

Value of the equity

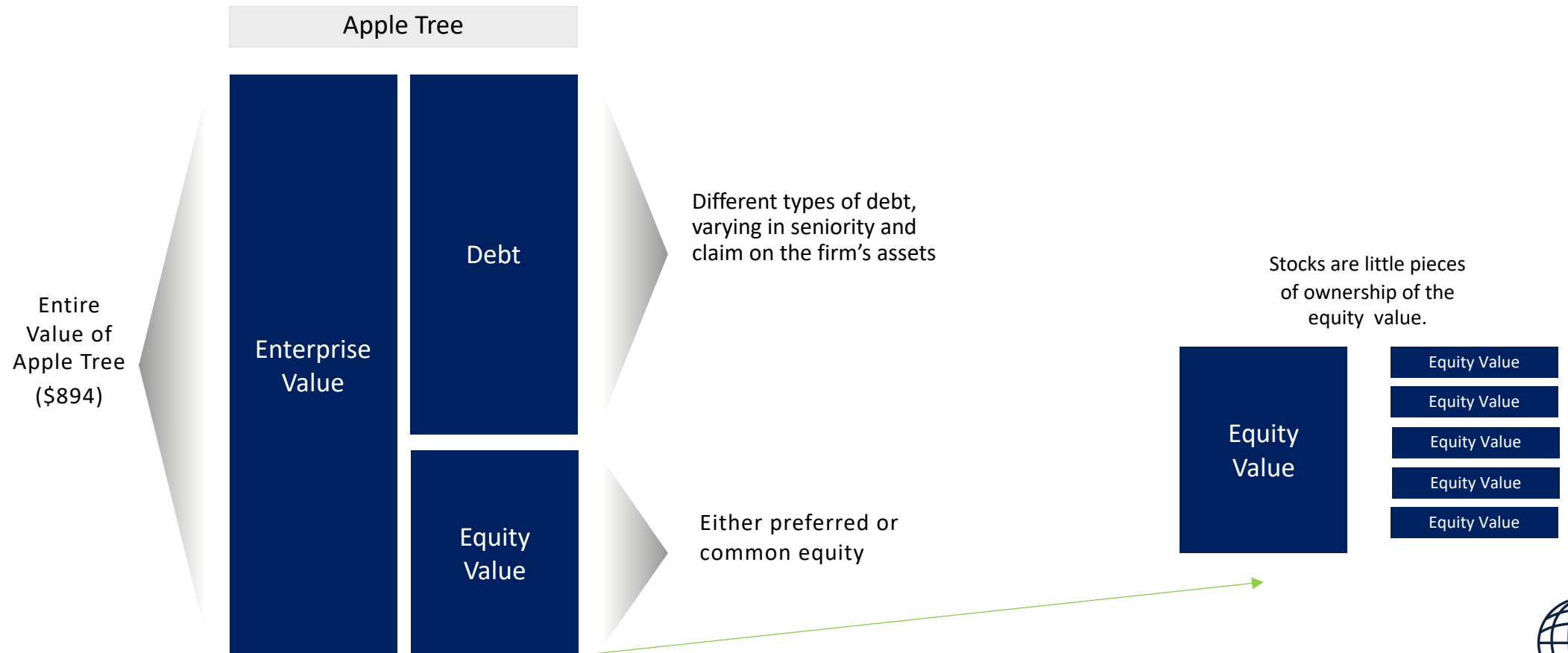
The value to stockholder

+

## Debt Value

Value of the debt

Value to debt holders



# The EV Formula

$$EV = D + E - C$$

**EV = Enterprise Value** (total business value – output of your financial models)

**D = Debt** (prefer market value, but ok to use book value on Balance Sheet)

**E = Equity** (market capitalization)

**C = Cash**

- Why add debt?!?
  - The value of the company is what people will pay for it. Debt holders have a right to the value in the business. What the debt is worth + what the equity is worth = value of the business
- Why minus cash?!?
  - Equity value accounts for it
  - Technically, cash is a non-operating asset
  - Buyer uses cash from company to “pay down” business



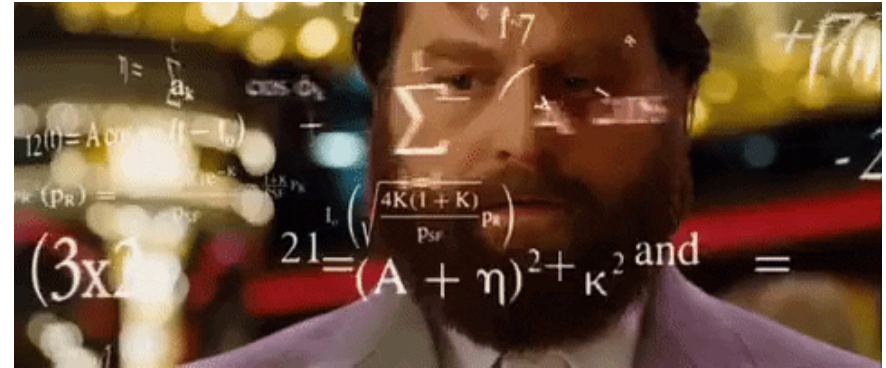
# Want to Learn More About Valuation?

There are many ways to find value.

You may have heard of a DCF, Comps,  
LBO, Precedents....

**Come back next week to learn more about what  
these actually mean and how we use them in  
SIBC!**

*(Hint: People like to try to make them sound wayyyyyy more  
complicated than they are. We will help you break them down!)*



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# Different Types of Industries (Fruit Trees)

AKA How to Spot the Best Company

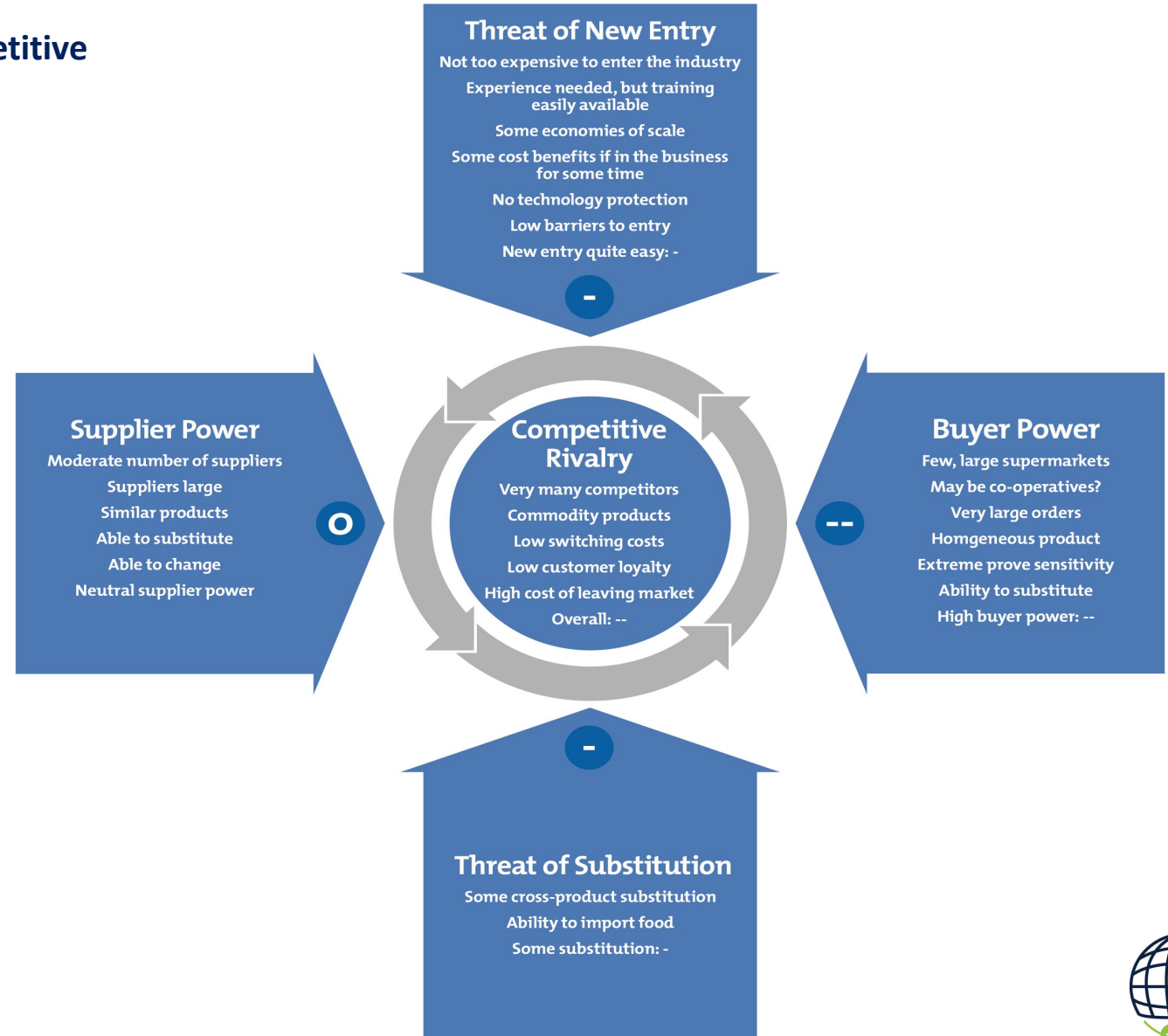
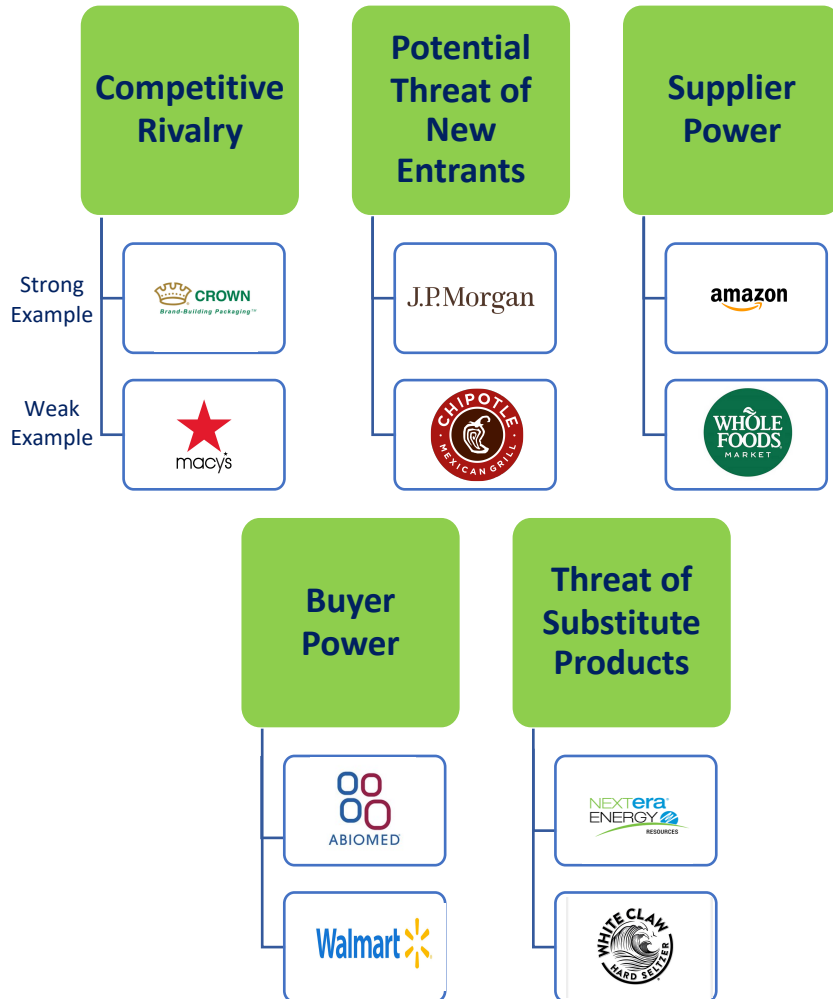
	Example Fruit Tree	What the Industry Entails
Consumer/Retail	Lemon	Apparel, food and beverages, pet food and services, beauty and personal care products, restaurants, specialty and hardline retailers, department stores and supermarkets.
Healthcare	Apple	Biotechnology, Diagnostics / Life Sciences, Healthcare Information Technology, Healthcare Services, Medical Devices, and Pharmaceuticals.
Industrials	Orange	Aerospace and defense, automotive, building and construction, business services, capital goods, diversified industrials, transportation and infrastructure, and paper, forest products and packaging.
Natural Resources/Energy	Pear	Power, infrastructure, chemicals, metals and mining and alternative energy fields.
Real Estate	Cherry	Real estate investment trusts (REITs), hotel and gaming companies, retailers and public-sector entities.
TMT	Plum	Electronics, software, Internet, media, wireless and cable companies.



# How to Find the *Best* Fruit Tree Out There – Industry Overview

AKA How to Spot the Best Company

Porter's Five Forces is a framework for analyzing the competitive forces that shape every industry



# How to Find the *Best* Apple Tree Out There – Company Overview

AKA How to Spot the Best Company



## Management Team

A management team can make or break a company and all the best performing stocks have one thing in common, a strong management team. It is hard to determine a strong management team (as this is incredibly qualitative) but you can read reports about the top executives, listen to earnings calls, and look at previous experience to get a general idea.



## Strong Cash Flow

The best companies typically have high, stable cash flows. This is important because the current value of a company is equal to the future cash flows, so more cash flows means more value. With that being said, there are some stocks that have negative cash flow but could still be argued to be a good investment. These are rare, but they exist.



## Competitive Advantage

Many investors like to invest on the basis of a company's "moat" meaning what do they have that separates them from their competitors. Companies like Facebook, Apple, Netflix, and Google all have core characteristics that currently make them and will continue to make them better than their competitors.



## Growth

If recognized early, growth can be a great way to make a strong return on a stock. Although sometimes the best value stocks are those that are just barely growing but are inefficiently priced.



## High Margins

Not all companies have high margins, but a company that is able to sell a product for a lot more than it costs to make is going to have a lot more money flowing to the bottom line and back to investors. This also gives a margin of safety meaning the company can cut prices in a downturn. Some companies, like Amazon, have very low margins but have massive revenue.



## Target Market

A company may be the best at what it does, but if there is no market for said company then the company's growth is ultimately limited. This isn't about looking at short-term trends (imagine if you invested in a Silly-Bandz company) but rather about long-term need.



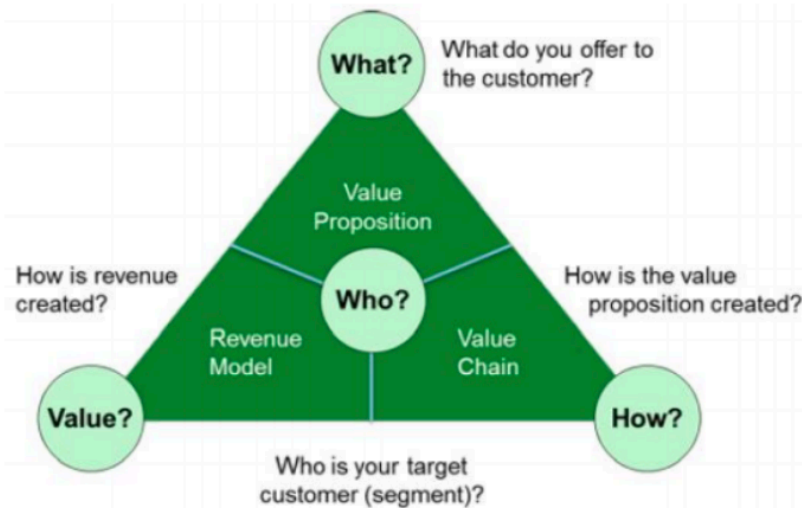
## Stable Capital Structure

Debt can be incredibly valuable for some companies, but for others it can lead to their demise. You want to look at a company's capital structure and debt covenants and ensure the company can continue to operate for the foreseeable future.



# How to Understand the Apple Tree & a Business Model

- In *The New, New Thing*, famous author, Michael Lewis, refers to business models as “a term of art” – by this he means that it is something everyone can see but not necessarily define
- He gives a simple definition of a business model: how you plan to make money
- A business model is essentially composed of three components: What are you offering? Why are you offering it? Who are you offering it to?
- If you are able to understand these three questions then you can begin to understand the beginning framework of a business model!



## CAN'T THINK OF A NEW BUSINESS MODEL?

Try adapting one of these basic forms.

ANALOGY	HOW IT WORKS	EXAMPLE
Affinity club	Pay royalties to some large organization for the right to sell your product exclusively to their customers.	• MBNA
Brokerage	Bring together buyers and sellers, charging a fee per transaction to one or another party.	• Century 21 • Orbitz
Bundling	Package related goods and services together.	• Fast-food value meals • iPod/iTunes
Cell phone	Charge different rates for discrete levels of a service.	• Sprint • Better Place
Crowdsourcing	Get a large group of people to contribute content for free in exchange for access to other people's content.	• Wikipedia • YouTube
Disintermediation	Sell direct, sidestepping traditional middlemen.	• Dell • WebMD
Fractionalization	Sell partial use of something.	• NetJets • Time-shares
Freemium	Offer basic services for free, charge for premium service.	• LinkedIn
Leasing	Rent, rather than sell, high-margin, high-priced products.	• Cars • MachineryLink

Low-touch	Lower prices by decreasing service.	• Walmart • IKEA
Negative operating cycle	Lower prices by receiving payment before delivering the offering.	• Amazon
Pay as you go	Charge for actual, metered usage.	• Electric companies
Razor/blades	Offer the high-margin razor below cost to increase volume sales of the low-margin razor blades.	• Printers and ink
Reverse razor/blades	Offer the low-margin item below cost to encourage sales of the high-margin companion product.	• Kindle • iPod/iTunes
Reverse auction	Set a ceiling price and have participants bid as the price drops.	• Elance.com
Product to service	Rather than sell a product, sell the service the product performs.	• Zipcar
Standardization	Standardize a previously personalized service to lower costs.	• MinuteClinic
Subscription	Charge a subscription fee to gain access to a service.	• Netflix
User communities	Grant members access to a network, charging both membership fees and advertising.	• Angie's List

SOURCE SEIZING THE WHITE SPACE BY MARK JOHNSON

HBR.ORG



# My Apple Tree Is *Built Different*: Sources of Differentiation

## Disruptive Innovation

Introducing a better business model into an existing market.

This can be done in a number of ways:

- Different distribution system: iTunes Store
- Faster inventory turns: Kmart
- Different manufacturing approach: Steel minimills

Three Components

1. Enabling Technology
2. Innovative Business Model
3. Coherent Value Network



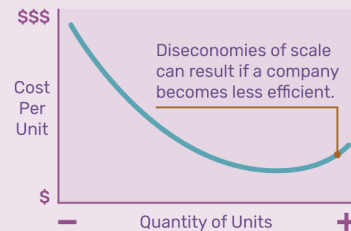
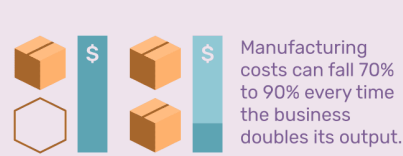
## Economies of Scale

Economies of scale are cost advantages reaped by companies when production becomes efficient.

Companies achieve economies of scale by increasing production and lowering costs. This happens because costs are spread over a larger number of goods.

### Economies of Scale

An economics term that describes a competitive advantage that large entities have over smaller entities.



the balance

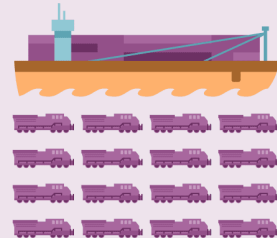


#### Internal

The sheer size of the company allowing bulk purchases.

#### External

Receiving preferential treatment from government or other external sources.



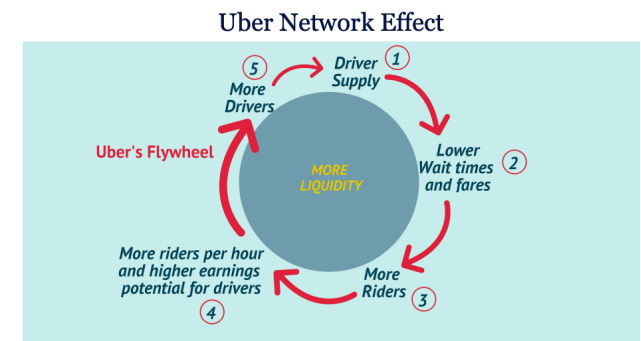
Large shipping companies can use ships that carry as many goods as 16 freight trains.

## Network Effect

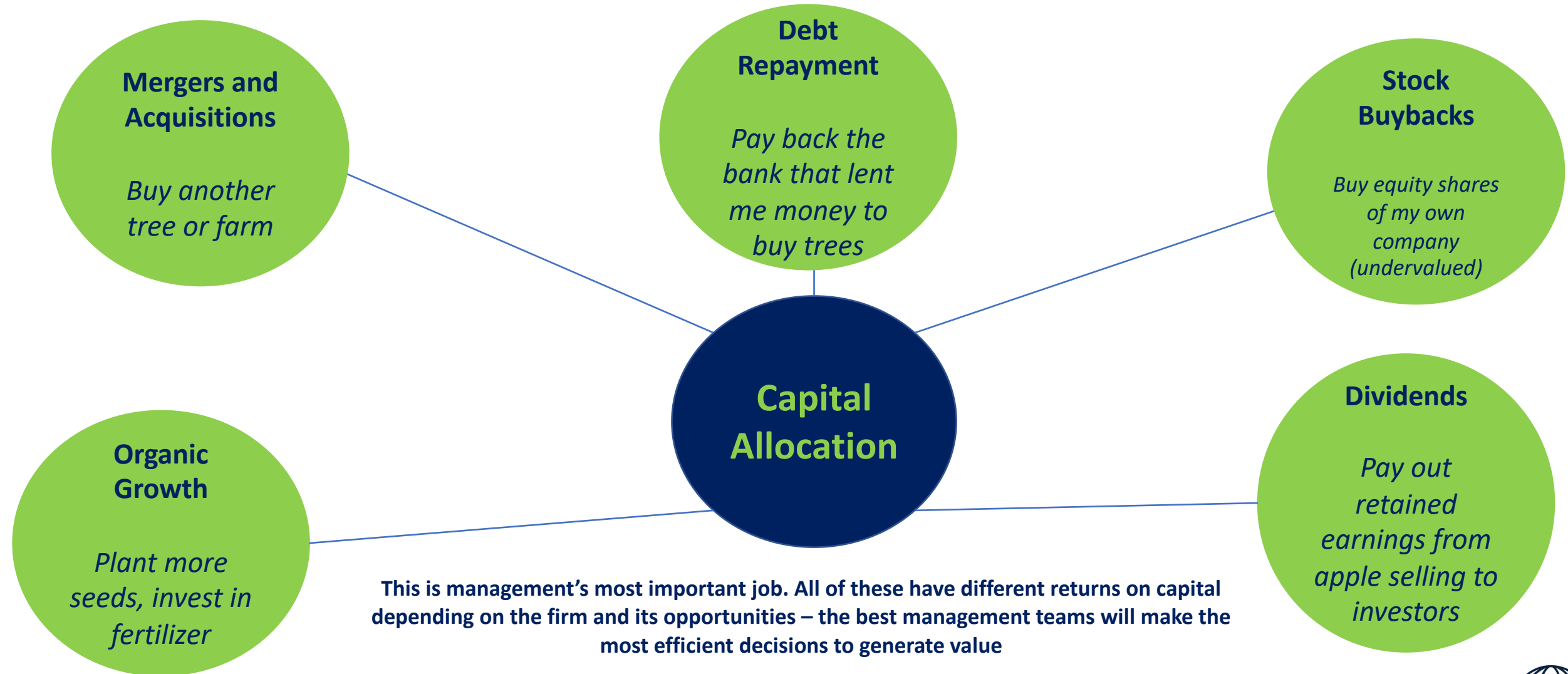
Network effects are a phenomenon in which as more people join a platform or use a service than the value of that platform or service improves.

This means that more people are then enticed to join that network or use that service and as a result the service continues to become more valuable.

This creates a flywheel effect that helps create a valuable asset that cannot be easily replicated.



# What Is My Apple Tree Doing With Cash: Capital Allocation



*"The first law of capital allocation—whether the money is slated for acquisitions or share repurchases—is that what is smart at one price is dumb at another"*

*- Warren Buffett*



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# Where do I begin my research on this Apple Tree?



- Publicly traded companies file reports on their business operations and performance that can be found via the SEC EDGAR search function (google SEC EDGAR → Company search page)
  - Both the interface and the reports themselves can be daunting at first, but we'll show you where to get started
  - A company's 10-K is the best place to read up on the firm as a whole, paying special attention to the following sections
  - A 10-Q form is filed quarterly and might contain the latest financial data depending on when the company releases their 10-K
  - An 8-K is a catch-all filing for any unscheduled events that are deemed material to shareholders such as security issuances
- 
- In addition to filing with the SEC, publicly traded companies often have a page on their website dedicated to disclosing financial information (google the company name followed by "investor relations")
  - Here you might find more visually appealing reports, management presentations from investor conferences, and earnings call information
  - Following the publication of quarterly results, firms will walk through their results on an earnings call to provide more color for sell side research analysts (in the context of SIBC, you!!)
  - Transcripts from these calls are typically available on IR pages or through pages such as the Motley Fool
    - The Q&A can be particularly helpful since you can see what the pros are digging into within a firm's financials or operations
- 
- Available through the Mahaffey Business Library website, IBISWorld is a great way to gain a better understanding of the industry in which a company operates
  - Useful features include a supply chain analysis, market share statistics, commentary on trends shaping the industry, and descriptions of leading players in the space
  - An understanding of the industry not only allows you to make thoughtful predictions about firm performance but also opens doors to further research on competitors





# Want to learn more about the nuances of valuation?



## You may have heard of the infamous 400 Q interview guides

These are great resources to guide your understanding of accounting, valuation, and high finance in general—key word being GUIDE, so do not try to memorize the answers you see

If you can strive to understand the intuition behind these questions, the “why” behind the analyses you do in SIBC will become much clearer

The Notre Dame Wall Street Club focuses more on interview preparation and networking, so we will leave the details to them

Don't go waste money on some guide either—NDIGI has a google folder you can access that has these materials!



THE NOTRE DAME  
INSTITUTE  
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INVESTING



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